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IN THE TITLE:

Page 1; line 1, please delete the terms "OPTIMAL STIFFNESS MATCHING STRUCTURE OF PLANAR BEARING AND AXIS OF ROTARY MECHANISM" and insert therefor the terms --HARDNESS MATCHED ROTARY MECHANISM--.

IN THE CLAIMS:

Please cancel Claims 1-3 without prejudice.

Please insert the following Claims:

4. A hardness matched rotary mechanism comprising:
a sliding bearing having an inner surface portion defining an axially extending bore; and,
an axially extended shaft extending coaxially into said bore of said sliding bearing, said shaft having an outer surface portion slidably engaging said inner surface portion of said sliding bearing;
one of said inner and outer surface portions being formed of a metal alloy material having a substantial hardness value approximately within the range of HRC 50 - HRC 60, the other of said inner and outer surface portions being formed of a ceramic material having a substantial hardness value of approximately HRC 90.

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5. The hardness matched rotary mechanism as recited in Claim 4 wherein said inner portion of said sliding bearing is formed of said metal alloy material, and said outer portion of said shaft is formed of said ceramic material.

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6. The hardness matched rotary mechanism as recited in Claim 4 wherein said ceramic material is selected from the group consisting of: an oxide, a carbide, and a nitride.

7. The hardness matched rotary mechanism as recited in Claim 4 wherein said metal alloy material is formed by a mixture of a plurality of constituent metals.

8. The hardness matched rotary mechanism as recited in Claim 4 wherein said metal alloy material is formed by coating then hardening upon a substrate surface a plurality of constituent metals.
